

AMENDMENTS TO CLAIMS

Claim 1 (currently amended): A communication session management method for providing a transmission service having a plurality of service-levels, each service-level being associated with a separate quality-of-service (QOS), the method comprising:

preparing data for transmission at one of the plurality of service-levels by uniquely associating a service-level encryption key with said one of the plurality of service-levels;

encrypting said data with said service-level encryption key to form encrypted data uniquely associated with said one of the plurality of service-levels;
[[and]]

transmitting said encrypted data uniquely associated with said one of the plurality of service-levels to users entitled to said one of the plurality of service-levels;

determining that communication load at said one of the plurality of service-levels exceeds a threshold; and

downgrading to an available service-level that is lower in the QOS hierarchy than said one of the plurality of service-levels,

wherein said downgrading step is supported in one of the following modes: an automatic mode; and a mode in which downgrade is made upon confirmation of a user.

Claim 2 (original): A method according to claim 1 and also comprising the step of:

distributing to the users entitled to said one of the plurality of service levels decryption key derivation information for decrypting said encrypted data.

Claim 3 (original): A method according to claim 2 and wherein said decryption key derivation information is comprised in an entitlement control message (ECM).

Claim 4 (original): A method according to claim 1 and wherein said plurality of service-levels are hierarchical according to a QOS hierarchy.

Claim 5 (original): A method according to claim 4 and wherein each one of the plurality of service-levels includes an indication of at least one of the following: a data transmission bandwidth; a number of users that may concurrently connect to the transmission service; a set of transmission applications served; a type of downgrade support to a service-level lower in the QOS hierarchy; a type of disconnect-on-idle operation; and a determination of a Web server to connect to.

Claim 6 (cancelled)

Claim 7 (cancelled)

Claim 8 (currently amended): A method according to claim [[6]] 1 and wherein said downgrading step comprises:

- identifying the available service-level that is lower in the QOS hierarchy than said one of the plurality of service-levels;

- encrypting said data with an encryption key uniquely associated with said available service-level that is lower in the QOS hierarchy than said one of the plurality of service-levels to form encrypted data uniquely associated with said service-level that is lower in the QOS hierarchy; and

- transmitting said encrypted data uniquely associated with said service-level that is lower in the QOS hierarchy to users entitled to said one of the plurality of service-levels.

Claim 9 (original): A method according to claim 1 and wherein the transmission service comprises at least one of the following: a unicast transmission; and a multicast transmission.

Claim 10 (original): A method according to claim 1 and wherein said users comprise at least one of the following: individual users; and users of an Intranet.

Claim 11 (currently amended): A method according to claim 1 and wherein said encrypting step is performed in [[the]] a PID layer.

Claim 12 (original): A method according to claim 1 and also comprising the step of enabling the users entitled to said one of the plurality of service-levels to decrypt said encrypted data according to service-level entitlements of the users.

Claim 13 (original): A method according to claim 1 and wherein said data comprises at least one of the following: any type of computerized data; video information; audio information; and multimedia.

Claim 14 (original): A method according to claim 13 and wherein said data comprises on-demand data.

Claim 15 (currently amended): A system at a headend for providing a transmission service having a plurality of service-levels, each service-level being associated with a separate quality-of-service (QOS), the system comprising:

a management unit for preparing data for transmission at one of the plurality of service-levels by uniquely associating a service-level encryption key with said one of the plurality of service-levels;

an encryptor operatively associated with said management unit and operative to encrypt said data with said service-level encryption key to form encrypted data uniquely associated with said one of the plurality of service-levels; and

a transmitter unit operatively associated with said management unit and said encryptor and operative to transmit said encrypted data uniquely associated with said one of the plurality of service-levels to users entitled to said one of the plurality of service-levels,

wherein the management unit is operative to:

determine that communication load at said one of the plurality of service-levels exceeds a threshold; and
downgrade to an available service-level that is lower in the QOS hierarchy than said one of the plurality of service-levels,
wherein said downgrade is supported in one of the following modes: an automatic mode; and a mode in which downgrade is made upon confirmation of a user.

Claim 16 (original): A system according to claim 15 and wherein said data comprises at least one of the following: any type of computerized data; video information; audio information; and multimedia.

Claim 17 (original): A system according to claim 16 and wherein said data comprises on-demand data.

Claim 18 (original): A system according to claim 15 and wherein each one of the plurality of service-levels includes an indication of at least one of the following: a data transmission bandwidth; a number of users that may concurrently connect to the transmission service; a set of transmission applications served; a type of downgrade support to a service-level lower in the QOS hierarchy; a type of disconnect-on-idle operation; and a determination of a Web server to connect to.

Claim 19 (new): A communication session management method for providing a transmission service having a plurality of service-levels, each service-level being associated with a separate quality-of-service (QOS), the method comprising:

preparing data for transmission at one of the plurality of service-levels by uniquely associating a service-level encryption key with said one of the plurality of service-levels;

encrypting said data with said service-level encryption key to form encrypted data uniquely associated with said one of the plurality of service-levels; and

transmitting said encrypted data uniquely associated with said one of the plurality of service-levels to users entitled to said one of the plurality of service-levels,

wherein said encrypting step is performed in a PID layer.

Claim 20 (new): A communication session management method for providing a transmission service having a plurality of service-levels, each service-level being associated with a separate quality-of-service (QOS), the method comprising:

preparing data for transmission at one of the plurality of service-levels by uniquely associating a service-level encryption key with said one of the plurality of service-levels;

encrypting said data with said service-level encryption key to form encrypted data uniquely associated with said one of the plurality of service-levels; and

transmitting said encrypted data uniquely associated with said one of the plurality of service-levels to users entitled to said one of the plurality of service-levels,

wherein said plurality of service-levels are hierarchical according to a QOS hierarchy, and

each one of the plurality of service-levels includes an indication of at least one of the following: a number of users that may concurrently connect to the transmission service; a set of transmission applications served; a type of downgrade support to a service-level lower in the QOS hierarchy; a type of disconnect-on-idle operation; and a determination of a Web server to connect to.